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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,300	01/18/2002	Alan Cuthbertson	NIDN-10431	8380

7590

05/05/2003

Amersham Biosciences
800 Centennial Avenue
Piscataway, NJ 08855

EXAMINER

CHISM, BILLY D

ART UNIT

PAPER NUMBER

1654

DATE MAILED: 05/05/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/052,300

Applicant(s)

CUTHBERTSON, ALAN

Examiner

B. Dell Chism

Art Unit

1654

-- Th MAILING DATE of this communication app ars on th cov r she t with the correspond nce address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

This is the first Office Action on the merits. Claims 1-9 are under consideration.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is rejected for the indefinite recitation of acronyms, i.e., Acn-, MBzl- and tBu-, wherein the compound name should be spelled completely and then the acronym should be used.

Claims 2 and 4 are rejected for the indefinite recitation of the acronym TFA in claim 4 wherein the acronym was not introduced as being representative of trifluoroacetic acid of claim

2. Applicant should insert the acronym in claim 2 after the complete spelling of the word trifluoroacetic acid.

Claim 3 is rejected for the indefinite recitation of the acronym DMSO without first spelling the full word dimethylsulfoxide followed by the use of the acronym.

Claims 8-9 are rejected for the indefinite recitation of the term "or above." The claim is indefinite wherein there is no upper limit to the range for which Applicant has claimed.

Applicant has failed to establish the metes and bounds of the claim. Ranges must contain an upper and lower limit.

Claims 5-7 are rejected for depending from rejected claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Koide *et al.* 1993 (Chem. Pharm. Bull. Vol. 41, No. 6, pages 1030-1034) and Musiol *et al.* 1994 (Biopolymers, Vo. 34, pages 1553-1562).

Koide *et al.* teaches a 10% (v/v) DMSO-TFA solution for the oxidation and disulfide bond formation. However, TFA was used in a previous step for the deprotection by removing the MBzl group.

Musiol *et al.* teaches deprotection with TFA by removing tBut, however, DMSO is not taught for use with TFA.

The combined references differ from the claimed invention in that they do not teach a TFA/DMSO combined solution for purposes of deprotecting/cleaving and oxidizing thiols for the subsequent generation of disulphide bonds.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to use the DMSO-TFA combination for deprotection/cleavage and oxidation, especially wherein it is known in the art that TFA is a sufficient acid for deprotecting the claimed thiol-protecting groups and it is also known that DMSO-TFA solutions within the ranges specified by applicant are sufficient in oxidizing and generating disulfide bonds. One of

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ordinary skill in the art at the time the invention was made would have been motivated to use the DMSO-TFA combination for deprotection and oxidation of thiols having protecting groups and generation of disulfide bonds.

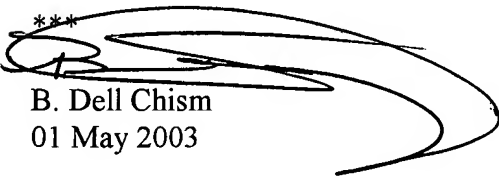
Conclusions


No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to B. Dell Chism whose telephone number is 703-306-5815. The examiner can normally be reached on 7:30 AM - 4:30 PM, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brenda Brumback can be reached on 703-306-3220. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-4242 for regular communications and 703-308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1235.


B. Dell Chism
01 May 2003


BRENDA BRUMBACK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600